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This report describes the implementation of a large-scale program at Brigham Young University to provide for at least one microteaching experience for each of 730 students enrolled in a beginning education course. A definition of microteaching (the creation of a miniature teaching situation under controlled conditions) and the elements which make it unique (the ease with which the teaching situation can be controlled and manipulated and the availability of immediate feedback for the student teacher) are included. A 6- to 8-minute video taped teaching act by a student, and positive evaluation by other students and an instructor (or graduate assistant) are presented as part of the 30-minute microteaching session which is structured to achieve a behavioral objective formulated especially for the course. Objections to the anxiety which the microteaching situation may create are described and discounted. The equipment, facilities, and logistical problems (especially those created by the time expenditure involved in over 700 thirty-minute sessions) are provided. Closing sections summarizing student and faculty evaluation of the program's effectiveness emphasize that the concern is no longer with program justification but with program expansion. (SM)

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DESCRIPTION OF A LARGE-SCALE MICRO-TEACHING PROGRAM[1]

by
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INTRODUCTION

The concept of micro-teaching probably qualifies as one of the three of four most provocative developments in teacher education, both pre-service and in-service, of the last five years. Everyone, it seems, is either conducting micro-teaching sessions or preparing to initiate them within a short period of time. This paper describes the program of one university which provides for at least one micro-teaching experience for every student in the initial teacher education course. In this paper the term "micro-teaching" refers to a scaled down teaching act involving the use of a video tape recorder. It should be noted that micro-teaching may be accomplished and is, at B.Y.U., without a video tape recorder.

Micro-teaching at Brigham Young University is defined as the creation of a miniature teaching situation under controlled conditions. All of the elements of the teaching act are present The uniqueness of micro-teaching consists of two elements: (1) the ease with which the teaching situation can be controlled and manipulated, and (2) the availability of immediate feedback for the student teacher, provided both through the recording and playback of the instructional sequence using a video tape recorder and through the critical comments of micro-students and the evaluator.

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[1]Paper read at Department of Audiovisual Instruction National Convention, Houston, Texas, March 25, 1968 and Utah Academy of Arts, Sciences, and Letters, Provo (Utah), April 12, 1968.

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At B.Y.U. the initial professional sequence course in teacher education is entitled "Basic Concepts of Teaching," a two semester-hour course taken, typically, by juniors and seniors preparing for either elementary or secondary teaching certification. Elementary and secondary sections of the course are taught separately. Unlike some universities which have a pre-service teacher population of 100 students or less, B.Y.U. has in its "Basic Concepts of Teaching" classes alone over 700 students per semester.

For the Fall 1967 semester, the course was restructured and the following behavioral objective was included:

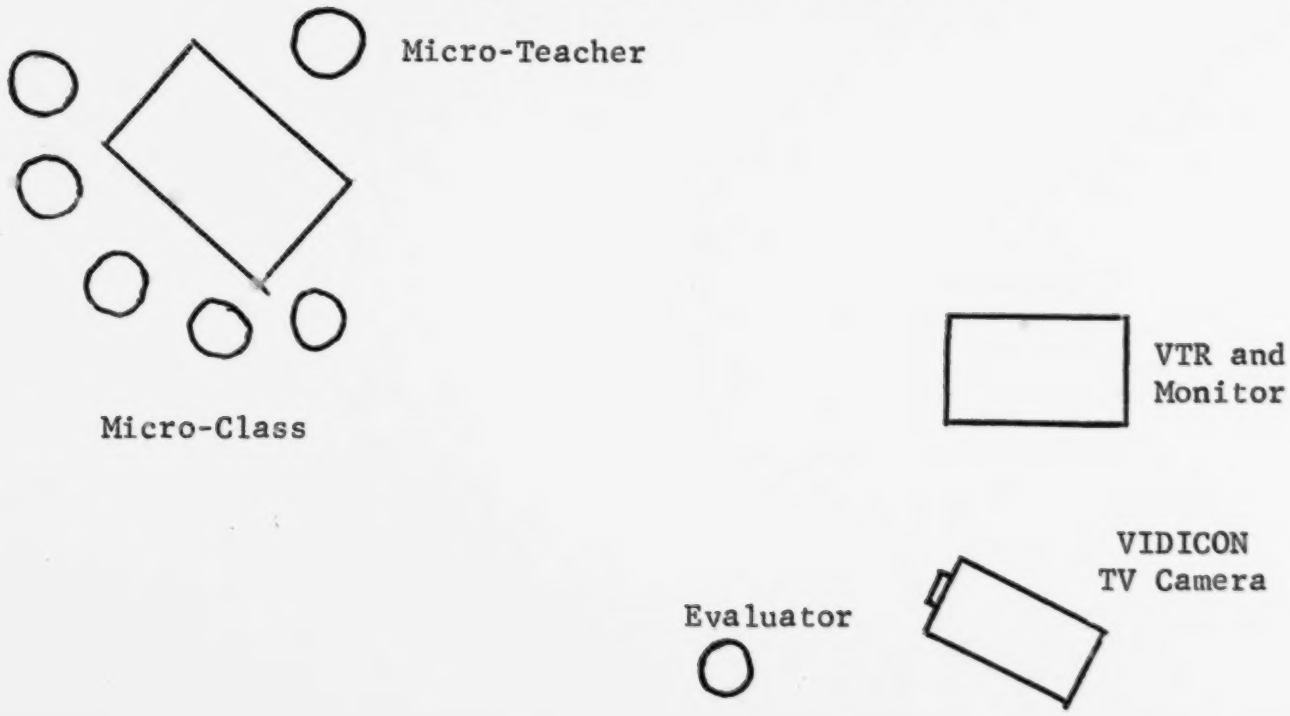
> Within a period of seven minutes, the pre-service teacher will teach a single concept within his major or minor field, and evaluate whether or not it has been learned.
>
> An evaluation of the micro-teaching will be made in terms of: the desirability and effectiveness of the materials selected to show the referent; application of the learning sequence; the amount of student involvement; whether or not the concept was learned; whether students were caused to think above the lowest cognitive level, and on the voice, poise, and mannerisms of the teacher.
>
> The pre-service teacher will write a summary of the suggestions made for improvement, those he would select for implementation, and the steps he would take to implement them.
>
> Minimal performance shall require that 75 per cent of the students taught shall have achieved the teacher's objective and learned the concept taught, and that students shall be caused to function <u>at least once above the lowest cognitive level</u>.

TYPICAL SESSION

To achieve the objective mentioned above the Teacher Education 301 student schedules time (30 minutes per micro-teaching session) in the micro-teaching studio. He also arranges for three or four of his classmates to be present to act as the micro-class.

In the studio a physical arrangement is used similar to that illustrated by the diagram on the next page. This arrangement can be varied depending on the purpose of the session.

Typical Equipment Arrangement



The pre-service teacher is prepared to teach a single concept (or psychomotor act) within six to eight minutes. The teaching act is intended to be a self-contained lesson and not simply the first six to eight minutes of a longer lesson. In the studio with the student teacher and the micro-class is the micro-teaching evaluator, who may be the instructor of the micro-teacher's "Basic Concepts of Teaching" class, another faculty member from the Teacher Education Department, or a trained graduate assistant. The evaluator also acts as the equipment operator.

As the micro-teaching presents his lesson, his performance is recorded on video tape. The evaluator observes critically the trainee's teaching effort and notes suggestions for improvement and commendations on an evaluation form.[2] At the conclusion of the lesson, the video tape is rewound and the members of the micro-class are given the same teaching evaluation form used by the evaluator. To begin the evaluation, the instructor-evaluator and the students discuss in a general, usually positive, way the student's performance.

[2]The BYU Concept Teaching Evaluation Form is being tested and revised on a continuing basis. Copies may be obtained by writing to the authors, c/o Teacher Education Department, Brigham Young University, Provo, Utah 84601.

The evaluator may make suggestions about what to look for during the video tape playback. As the video tape is replayed, the micro-teacher, micro-class members, and the evaluator review the teaching act and comment freely. If desired, a particular segment may be replayed, and also a "stop action" process may be used.

Recommendations are often made first by the trainee himself. Due to scheduling problems occasioned by the large number of students currently using the equipment, it is rare that a student is asked (or allowed) to reteach a lesson at the time. Some micro-teaching applications are able to accommodate reteaching.

It is appropriate to note here an objection which is sometimes voiced by educators who have heard of micro-teaching, but who have not had direct experience with the method: "Doesn't the micro-teaching situation with its cameras, operators, on-looking peers, and impact of the playback generate psychological pressures which result in (1) an atypical teaching performance, and (2) some form of defensive reaction to the anxiety produced?"

After two years and some 1,500 micro-teaching sessions, our answer would be "no" on both counts, with the following qualifications: The initial session may occasionally represent teaching behavior distorted somewhat by the micro-teacher's anxiety. Sometimes it is evident that the instructors need to emphasize positive characteristics during the playback session to offset somewhat the student teacher's negative perception of his performance. The anxiety produced by the camera is quite similar to that produced during the first few days of teaching by an actual classroom full of students, but without risk to thirty students.

Typically, however, these problems are of such minor importance that we can effectively discount them.

EQUIPMENT, FACILITIES AND LOGISTICS

At B.Y.U. two one-inch Sony model EV-200 video tape recorders and one, half-inch Concord model 600 are presently being used. Sylvania SC-12A cameras with zoom lenses and with top-mounted Sony 5-inch monitors are used. A 23-inch monitor on a movable cart allows a class of up to thirty-give or forty to view comfortably. Audio can be a headache, even when the micro-class is composed of only four or five persons. Generally, an audio mixer which allows feeding of a lavaliere microphone (teacher) and one or two stand microphones (class) into the video tape recorder is used. A single stand microphone placed between the teacher and the students has been used with limited success.

University policy requires that the Broadcast Services Department purchase all video tape equipment used by the university. Departments making extensive use of the equipment receive it on long-term loan from Broadcast Services. Maintenance is done by Broadcast Services personnel.

In addition to the education building on campus in which one set of equipment is housed, a section of a home owned by the university has been converted into a micro-teaching studio. Here the other Sony set and the Concord equipment are employed.

Providing some 730 micro-teaching sessions during a semester adds approximately 365 hours to an already heavy work load, since about 30 minutes of time per session is required. The logistical problems involved become apparent when one considers that due to the necessity of providing preliminary and prerequisite experiences, the more than 700 micro-teaching sessions are scheduled only during the last ten weeks of the semester. The fall 1967 semester found the studio equipment in operation fourteen

hours a day (7 a.m. to 9 or 9:30 p.m.) Monday through Friday and an additional five hours on Saturday mornings. Due to the extensive use of the education building for other university classes, the equipment housed there was used an average of three to five hours per weekday and five hours on Saturday.

As noted earlier, the evaluation of micro-teaching sessions was handled by faculty members and graduate assistants, the latter trained especially for this work. Inasmuch as regular class time was not used for micro-teaching with the video tape recorder, it was impossible for the students to schedule their micro-teaching only at times when their particular instructor was available to act as evaluator. Hence the need for three graduate students to assist.

EVALUATION OF EFFECTIVENESS OF PROGRAM

Student reaction to the micro-teaching experience has been both decided and positive. A random sample (N-35) of the 730 students who micro-taught during the fall semester of 1967 indicates that almost nine out of ten of those who micro-taught as least once believed such experience indicated areas where they could make improvement. (See Table 1.) Seventy-five per cent of those in the sample said that it was "very true" or "somewhat true" that micro-teaching "changed my self-image as a teacher." Other conclusions drawn by the students can be seen by referring to the table.

Insert Table 1 about here

Evaluating the learning activities provided in Teacher Education 301, 87% of a random sample of students from three sections (N-41) rated micro-teaching as "excellent." No other learning activities provided during the course was rated "excellent" by more than 37% of the students. (See Table 2)

Insert Table 2 about here

Additional information has been gleaned from those who evaluated the students. Their perception of the worth of the micro-teaching learning activity is seen in Table 3.

Insert Table 3 about here

CONCLUSION

The highly favorable experimental evidence generated at Stanford University and other institutions where micro-teaching has been used is substantiated by the B.Y.U. results in providing the experience to large numbers of beginning elementary and secondary education majors. The concern of B.Y.U. is with the question, "How can we increase the micro-teaching experiences for preservice teachers?" not with the already-answered question, "Does it help?"

James Russell, former chairman of the Educational Policies Commission of NEA recently wrote:

> Pre-service education of teachers offers little hope (of providing innovative teachers) because the student is not engaged in actual practice of his profession and hence is usually unable to understand the changes of self-image which are implicit in the things he may be learning. In other words, his learning is verbal only, unrelated to practice.[3]

At B.Y.U. micro-teaching is seen to be a beginning solution to the dilemma posed by Dr. Russell.

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[3]James K. Russell, Change and Challenge in American Education, (Boston, Houghton Mifflin Co., 1965), pp. 94-5.

TABLE 1

Evaluation of Micro-Teaching Experience
By Teacher Education 301 Students

N=85

Statement	Very True	Somewhat True	Slightly True	Not True
Micro-teaching (including video taping) as a technique to evaluate by teaching:				
1. changed my self-image as a teacher	35%	41%	20%	4%
2. indicated to me areas where I can make improvement	88	9	3	0
3. is not much more than just a novel experience	6	4	11	80
4. could be easily replaced by other, more ordinary, expereinces	6	7	10	78
5. is embarrassing and discomforting	4	23	32	41
6. I would like more opportunities to be taped	58	24	6	12

TABLE 2

Percentage of Teacher Education 301 Students
Rating Selected Learning Activities as "Excellent"

N=41

	Learning Activity	% of Students Rating the Activity as "Excellent"
1.	Micro-teaching with VTR	87
2.	Writing behavioral objectives	37
3.	Use of referent	37
4.	Writing lesson plans	32
5.	Working in team groups	27
6.	Inquiry teaching	17
7.	Class lecture-discussion	15
8.	Inductive/Deductive Teaching	12

TABLE 3

Evaluators' Perceptions of Micro-Teaching
with Teacher Education 301 Students

N=7*

	Very True	Somewhat True	Somewhat True	Not True
1. I perceived the students who micro-taught as having positive feelings toward this experience.	6**	1		
2. One micro-teaching experience seems to be sufficient for our purposes.			4	3
3. The time, effort, and expense necessary to provide each Teacher Ed. 301 student with one micro-teaching experience is justified.	6	1		
4. The degree of similarity between the micro-teaching experience and the real public school classroom is high.	2	5		

* These seven evaluated more than 98% of the 730 sessions conducted.

** Actual number of responses, not percentages.